

Name: _____ Date: _____

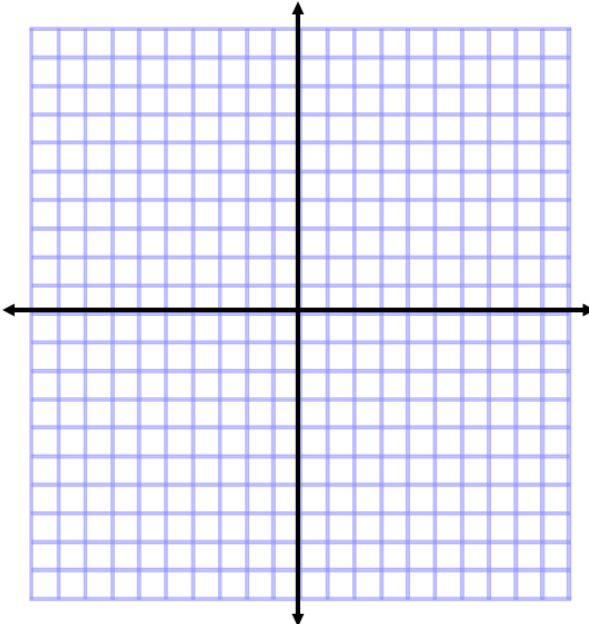
Unit 2 Practice Test

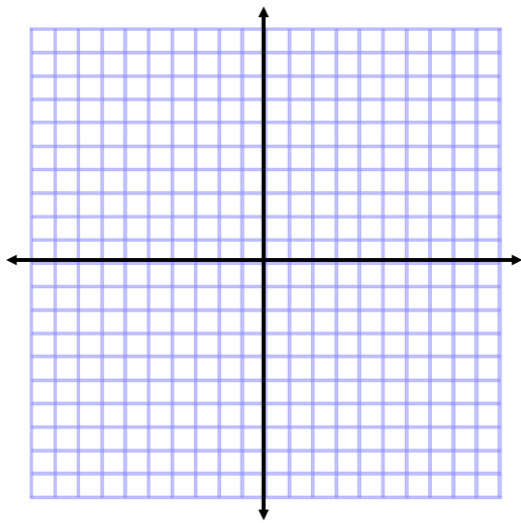
1. Please answer each question in at least TWO COMPLETE SENTENCES using at least TWO ALGEBRAIC TERMS. Echo the prompt and avoid vague words.

a) What is a system of linear equations? When finding the solution of a system of linear equations, what are you searching for?

b) What are the three possible solutions to a system of linear equations? Be sure to mention the solutions and the circumstances by which they occur.

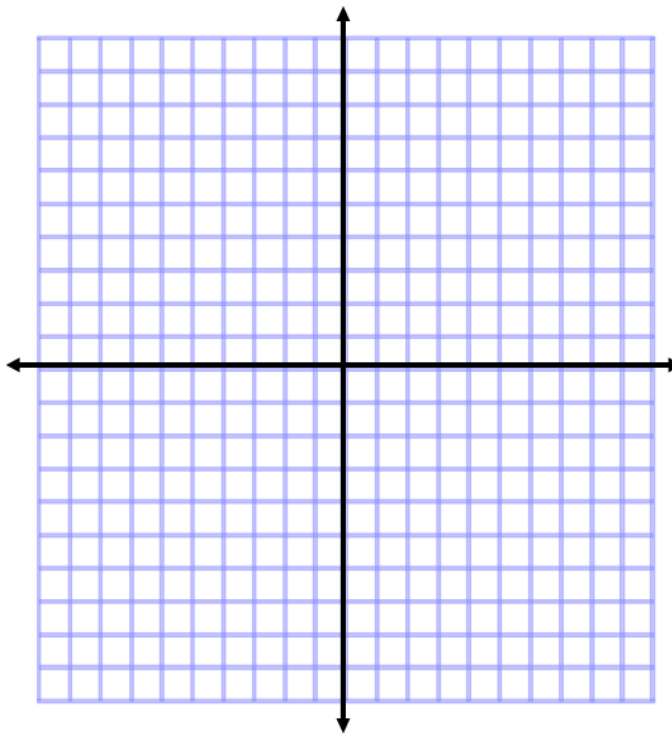
c) Write a system of linear equations. Tell which method you would use to solve this system and why.

2. Solve each system of equations by graphing.	You MUST check your solutions via SUBSTITUTION.
<p>a) $y = \frac{1}{4}x - 2$ and $2x - 8y = 16$</p> 	<p>Answer: (____, ____)</p>
<p>b) $x = -5$ and $y = 2$</p>	



Answer: (____, ____)

c) $y = -1/3x + 2$ and $2x + y = 2$



Answer: (____, ____)

3. Solve each system via substitution.

You MUST check your solutions via

a) $a + 2b = 19$
 $a - 2b = 11$

Answer: (____, ____)

b) $4x + 2y = 10$
 $3x + 3y = 9$

Answer: (____, ____)

KEEP GOING, WORD PROBLEMS ARE NEXT!

5. Kai has 400 gallons of 70% prune juice and Geist has 300 gallons of 30% prune juice. They want to have 40 gallons of a mixture that is 40% prune juice. How many gallons of Kai's mixture will they need? How many gallons of Geist's mixture will they need?

a. Define variables that make sense for the situation.

b. Write a system of equations.

c. Solve the system using a method of your choice.

d. Check via substitution and reality.

e. Write your answers with labels.

6. A certain amusement park has an entrance fee and an additional fee for each game you choose to play. Kyle paid for himself and four of his friends to enter the park and paid for eighteen games, for a total of \$88.50. Isaiah paid for himself and two of his friends to enter the park and paid for twenty-two games, for a total of \$75.50. What is the cost of one entrance fee? one game?

a. Define variables that make sense for the situation.

b. Write a system of equations.

c. Solve the system using a method of your choice.

d. Check via substitution and reality.

e. Write your answers with labels.

7. WLPCS received a grant to take a trip to California! They have a budget to take seven total modes of transportation, some planes and some buses. Each plane can hold one hundred forty passengers and each bus can hold sixty-four passengers. If there are a total of seven hundred fifty-two passengers, how many planes will WLPCS charter? How many buses?

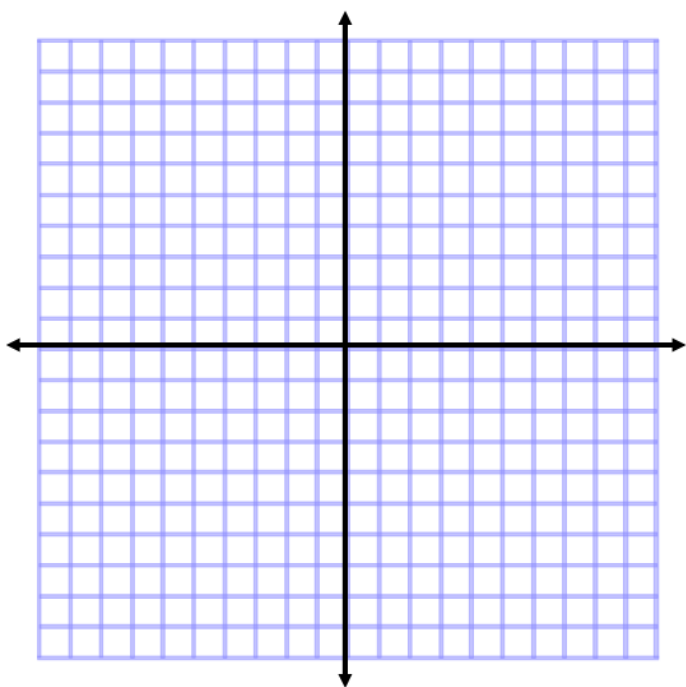
a. Define variables that make sense for the situation.

b. Write a system of equations.

c. Solve the system using a method of your choice.

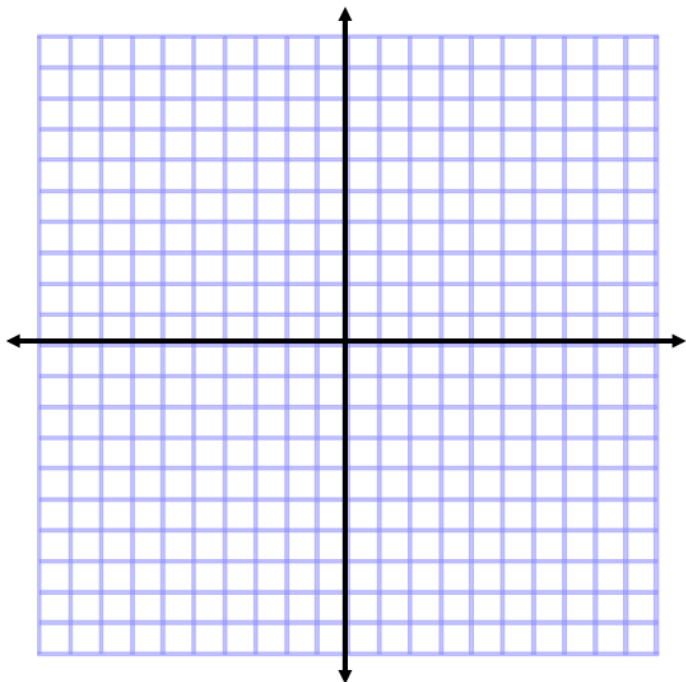
d. Check via substitution and reality.

e. Write your answers with labels.



10. Please graph the system of linear inequalities. BE CLEAR AS TO WHERE THE SOLUTION ZONE IS.

$$y > x + 4 \text{ and } y < x - 2$$



Test Points: You must test one point for each inequality. Show your work.

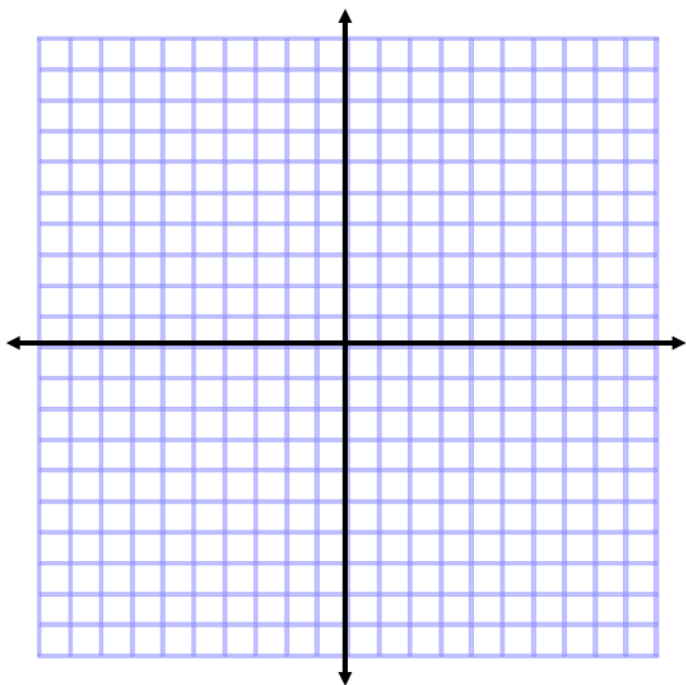
Test: (__, __)

Test: (____, ____)

11. Please graph the system of linear inequalities. BE CLEAR AS TO WHERE THE SOLUTION ZONE IS.

Test Points: You must test one point for each inequality. Show

$$x \geq 4 \quad \text{and} \quad y > -5$$



your work.

Test: (____, ____)

Test: (____, ____)